

**FY 2000 Subsistence Fisheries Project Narrative
Project #41**

Project Title: Eulachon Subsistence Use and Ecology Investigations

Investigator Organizations: USFS Chugach National Forest Glacier Ranger District, ADF&G Sport Fish and Commercial Fisheries Divisions, with local hires

Geographic Area: Cook Inlet/Gulf of Alaska

Information Type: Harvest Monitoring

Issue Addressed: The eulachon fisheries in Turnagain Arm are popular subsistence and personal use fisheries. Eulachon are also an important forage fish for the beluga whale, another subsistence resource. In the Twentymile River, it is thought that the eulachon population may be declining; however, we lack conclusive evidence. Although most use occurs from Anchorage residents, results of interviews conducted in 1997 indicate that eulachon fishery is an important subsistence specie for rural residents of Hope and Cooper Landing, and fishermen from as far as Willow, Trapper Creek, and Talkeetna. If, in fact, the population is declining and harvest success is low, there could be a resource allocation issue in the future.

Study Objectives:

1. Determine use of the eulachon fisheries (user demographics, catch data).
2. Characterize and map upper limits of spawning and critical spawning habitat
3. Conduct biomass surveys as an index of relative run strength.
4. Determine run timing and other aspects of eulachon biology (fecundity, age, etc.) in Twentymile River.
5. Determine presence/absence of eulachon in the Portage Creek and Placer River drainages.
6. Collect samples for a larger eulachon study to determine stock composition and interception in the Pacific.

Project Description: This multi-year study will be coordinated with the ADF&G eulachon project on the Copper River Delta. Harvest data collection will be consistent with the findings of the Statewide Subsistence Harvest Assessment. Key spawning locations will be mapped and characterized using GIS. We will also conduct biomass surveys of larval eulachon to determine population trends. These methods are consistent with those employed elsewhere (British Columbia and lower 48) and sampling will be coordinated with other efforts throughout the range of eulachon. We will determine run timing and other aspects of eulachon biology. Presence and absence sampling will occur in Portage Creek and Placer River, two adjacent streams. Samples will be collected for a larger eulachon study to determine stock composition and interception in the Pacific.

Consultations Completed/Potential for Capacity Building: Consultations have been conducted with Barry Stratton (ADF&G Sport Fish). The proposal was reviewed at the ADF&G area meetings and received support. ADF&G will also be contributing some in-kind services. Additional partners include: the University of Alaska Anchorage (UAA); University of Alaska Fairbanks (UAF), the Department of Fisheries and Oceans (DFO) in British Columbia, Canada; and the National Oceanic & Atmospheric Administration (NOAA). James Showalter and other elders of the Kenaitze IRA are very concerned about the apparent decline in the Twentymile River eulachon fishery and encourage this work. Jim Fall (ADF&G, Subsistence) has been contacted and the project was presented at the Southcentral Regional Advisory Council meeting on March 2nd. The project will coincide with a similar eulachon study on the Copper River Delta (Steve Moffitt, ADF&G Commercial Fisheries).

Deliverables/Products: This project will yield estimates of total use and catch as well as information on the demographics of resource users. Maps locating critical spawning habitat and the upper limits of migration will be created and spawning habitat will be characterized. Other aspects of eulachon ecology will also be summarized such as fecundity, age, and sex ratio. In addition, a baseline will be established for long term population monitoring using results from the biomass estimates.

Costs: The total budget is \$57,000 of which \$17,000 will be provided by UAA, UAF, ADF&G, DFO, and NOAA. The USFS will fund the remaining \$40,000. Project funding will be assessed annually and re-authorized by the USFS based on availability of funds and program needs.

Annual Budget Summary	Organizations	USFS	Local Hires	Total
FY 2000	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
FY 2001	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
FY 2002	\$20.0 K	\$5.0 K	\$15.0 K	\$40.0 K
Total	\$60.0 K	\$15.0 K	\$45.0 K	\$120.0 K